Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14BT2040** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ANIMAL BIOTECHNOLOGY AND CELL CULTURE TECHNIQUES** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Write in detail about the medium used in cell culture and discuss in detail about the use of serum in medium. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Draw the Animal cell culture layout plan and discuss the instruments used in cell culture laboratory. | CO1 | 20 |
| 3. | a. | Write in detail about the trypsinization process for the preparation of primary cell culture | CO2 | 10 |
|  | b. | Steps involved for sub culturing the cell line. | CO2 | 10 |
| (OR) | | | | |
| 4. |  | Describe in detail about Micromanipulation technique used for In vitro fertilization. | CO2 | 20 |
| 5. | a. | Write the applications of scaling up process in cell culture system. | CO3 | 5 |
|  | b. | Explain Synthetic Hollow fiber, Opticel culture. | CO3 | 5 |
|  | c. | Explain Bead Bead reactor and Micro carrier culture. | CO3 | 10 |
| (OR) | | | | |
| 6. |  | Describe the protocols for cell viability assays. | CO2 | 20 |
| 7. |  | Explain in detail about transgenic cows that produce recombinant human lactoferrin. | CO4 | 20 |
| (OR) | | | | |
| 8. |  | Discuss in detail about the Purification and quality control tests involved in the Rabies Vaccine production. | CO3 | 20 |
|  | | **Compulsory:** |  |  |  |
| 9. | a. | Define Tissue Engineering and discuss their importance in the field of Medicine. | CO4 | 10 |
|  | b. | Protocol for Human Dermal Fibroblast(hdf) seeding with collagen sponges. | CO4 | 5 |
|  | c. | Urothelial cell seeding on collagen sponges. | CO4 | 5 |

ALL THE BEST